UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco. CA 94105-3901

OCT 2 8 2015

Lisa Gibson
U.S. Army Corps of Engineers, Sacramento District
Regulatory Branch
1325 J Street, Room 1350
Sacramento, CA 95814-2922

Subject: Draft Environmental Impact Statement for the proposed Panoche Valley Solar Facility, San Benito County, California (CEQ #20150258)

Dear Ms. Gibson:

The U.S. Environmental Protection Agency has reviewed the Draft Environmental Impact Statement for the proposed Panoche Valley Solar Facility. Our review and comments are provided pursuant to the National Environmental Policy Act, the Council on Environmental Quality Regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act. We appreciate the U.S. Army Corps of Engineers willingness to accept and respond to our comment letter after the public comment period.

EPA supports increased renewable energy resource development. Using renewable energy resources, such as solar power, can help the nation meet its energy requirements while minimizing the generation of greenhouse gas emissions. The proposed project includes construction and operation of a 247 megawatt (MW) solar photovoltaic electricity generating facility on approximately 2,506 acres in eastern unincorporated San Benito County, with associated transmission infrastructure located in Fresno County, California.

EPA provided extensive formal scoping comments for the project on September 7, 2012, including detailed recommendations regarding purpose and need, range of alternatives, cumulative impacts, biological and water resources, and other resource areas of concern. We appreciate the efforts of the U. S. Army Corps of Engineers (USACE), the applicant, and its consultants to address our comments in the Draft EIS. We note that the project footprint has been reduced from 4,700 to 2506 acres to avoid certain impacts to aquatic and biological resources, and we are pleased to see that grading will be limited, and existing drainage patterns and vegetation will be maintained, where possible. We understand that the applicant has identified 24,176 acres of mitigation lands to compensate for impacts on biological and agriculture resources. We also note that some of our concerns, such as those pertaining to fugitive dust, valley fever, noise and traffic, have been addressed in the applicant-proposed measures and additional mitigation measures that were adopted in the San Benito County's conditional use permit process and are considered part of this proposed project (pg. 2-54).

While we appreciate the substantial efforts that have been made to minimize the impacts of the proposed project on air and water resources, we are aware that the project, as proposed, would be located in a core recovery area for multiple threatened and endangered species. We note that the offsite Alternative C - Westlands CREZ, which would site the project in an area designated by California's Renewable Energy Transmission Initiative (RETI) as a Competitive Renewable Energy Zone, would avoid such high value habitat and offer substantial other advantages, as well. As noted in the DEIS, the Westlands CREZ acreage has been retired from agriculture due to water shortages and selenium contamination, is next to existing transmission and Gates Substation, and has the potential to accommodate up to 5,000 MW of solar energy. The CREZ lands are formally recognized as drainage impaired by the US Bureau of Reclamation, and do not contain a high degree of wildlife diversity or high-quality habitat. The DEIS concludes that the impacts of constructing and operating the project at that site would be less than significant, given the implementation of standard mitigation measures likely to be required by the involved permitting agencies. We recommend that the applicant consider siting the project at the Westlands CREZ location.

The USACE has not identified a preferred alternative in the Draft EIS. Based on our review, EPA is rating all alternatives evaluated in the document as *Lack of Objections* (LO) (Please see the enclosed "Summary of EPA Rating Definitions."). We recommend that the USACE identify, in the Final EIS, the Least Environmentally Damaging Practicable Alternative and the USACE's preferred alternative, and describe how the proposed project would comply with the Clean Water Act section 404(b)(1) Guidelines. The enclosed Detailed Comments provide additional recommendations to further minimize the impacts of the proposed project.

We are available to further discuss our enclosed detailed comments. Thank you for the opportunity to review this Draft EIS. When the Final EIS is published, please send one hard copy to us at the address above (Mail Code: ENF-4-2). If you have any questions, please contact me at 415-972-3521or contact Anne Ardillo, the lead reviewer for this project. Anne can be reached at (415) 947-4257 or ardillo.anne@epa.gov.

Sincerely,

Kathleen Martyn Goforth, Manager
Environmental Review Section (ENF-4-2)

Enclosures: Summary of EPA Rating Definitions
EPA's Detailed Comments

Cc: Doug Cooper, U.S. Fish and Wildlife Service
Amedee Brickey, U.S. Fish and Wildlife Service

SUMMARY OF EPA RATING DEFINITIONS*

This rating system was developed as a means to summarize the U.S. Environmental Protection Agency's (EPA) level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the Environmental Impact Statement (EIS).

ENVIRONMENTAL IMPACT OF THE ACTION

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

ADEQUACY OF THE IMPACT STATEMENT

"Category 1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

"Category 2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

"Category 3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640, Policy and Procedures for the Review of Federal Actions Impacting the Environment.

U.S. EPA DETAILED COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED PANOCHE VALLEY SOLAR FACILITY, SAN BENITO COUNTY, CALIFORNIA, OCTOBER 2015

Water Supply

Water required for on-site construction and operation of the proposed project would be provided by pumping groundwater from the Panoche Valley Groundwater Basin, using existing water wells or new wells. Water needed for the total construction phase (18 months) is estimated to be 385 acre-feet per year (AFY), while annual operation water usage is estimated at approximately 2 AFY (pp. 2-41, 3-479). The DEIS concludes that the aquifer recharge is approximately 2,700 AFY. It further states "*although these numbers may vary with annual variations in precipitation, groundwater usage, and run-off, and site-specific data were limited for several components of the water budget, the observed rise in the water table (since irrigation declined) supports the conclusion that the Panoche Valley aquifer is being recharged by precipitation infiltration.*" (pp. 465, 466).

It is unclear from the DEIS whether the characterization of groundwater conditions reflect critical drought years. The current drought is perhaps the most severe the state has ever experienced and would be the relevant baseline for additional impacts from the proposed action, slated to commence in 2016. According to the California Department of Water Resources' November 2014 Drought Update[1], over 50 percent of monitored wells in the Central and Sacramento Valleys have experienced groundwater level decreases of 2.5 feet or more from spring of 2013 to spring of 2014, with over 20% experiencing decreases of more than 10 feet. For the period from spring 2010 to spring 2014, nearly 30% of monitored wells have experienced declines in excess of 10 feet.

Per mitigation measure WR-1.1 Groundwater Monitoring and Reporting Plan, pre- and post-construction groundwater level trends would be monitored near the project pumping wells and near the potentially impacted private wells (pg. 474). The mitigation measure states, "*if results of the monthly trend analyses indicate that the project pumping has resulted in water level decline of 5 feet or more below the baseline trend at nearby private wells, the applicant shall be . prohibited from using the well(s) as a water source for the project, or shall reduce groundwater pumping until water levels stabilize or recover*" (pp. C-58, 59). The DEIS does not provide a contingency plan in the event that the five foot threshold is met and water must be obtained either from another well or purchased from an off-site water source.

> *Recommendations:*
> Describe in the Final EIS the effects of the most recent drought on the Panoche Valley Groundwater Basin and clarify the extent to which data from the drought period were included in the groundwater analysis.

---

[1] "Public Update for Drought Response: Groundwater Basins with Potential Water Shortages, Gaps in Groundwater Monitoring, Monitoring of Land Subsidence, and Agricultural Land Fallowing," Department of Water Resources, November 2014, http://www.water.ca.gov/waterconditions/docs/DWR_PublicUpdateforDroughtResponse_GroundwaterBasins.pdf

Confirm availability of an adequate water supply for all phases of the proposed project and evaluate the environmental impacts of relying on the proposed, and any contingent, source of water.

Biological Resources

The proposed site supports a diversity of plants, mammals, birds, bats, and reptiles, including special status species, and is located in a core recovery area for blunt-nosed leopard lizards, giant kangaroo rats, and San Joaquin kit foxes. The DEIS acknowledges that the potential for direct and indirect impacts to bats and migratory and nesting birds will continue through the construction, operation and maintenance phases of the proposed project. We understand that the U.S. Fish and Wildlife Service (FWS) has issued its final Biological Opinion (BO) regarding the USACE's proposed action. The BO will play an important role in informing the decision on which alternative to approve and what commitments, terms, and conditions will accompany that approval. In addition, the DEIS indicates that a draft Avian Conservation Strategy and Eagle Conservation Plan has been prepared and will be finalized in consultation with California Department of Fish and Wildlife and FWS (pg. 3-217).

Recommendations:
Provide, in the Final EIS, updates on the Endangered Species Act section 7 consultation process and the Avian Conservation Strategy and Eagle Conservation Plan. Summarize and append the final BO and the final Conservation Plan. Incorporate into the Final EIS and Record of Decision (ROD) any mitigation and monitoring measures that would be required pursuant to those documents.

Climate Change

We believe the Council on Environmental Quality's December 2014 revised draft guidance for Federal agencies' consideration of GHG emissions and climate change impacts in NEPA outlines a reasonable approach for climate change analysis. This guidance explains that agencies should consider both the potential effects of a proposed action on climate change, as indicated by its estimated greenhouse gas emissions, and the implications of climate change for the environmental effects of a proposed action.

According to the DEIS, the Panoche Valley has relatively few anthropogenic (human-caused) greenhouse gas emission sources, due to low population and agricultural activity and a lack of large stationary sources of emissions. The emission estimate for construction of the proposed project is 22,390 MTCO2e, and the DEIS concludes that the proposed project would not be a locally, regionally, or nationally significant source of greenhouse gases (pg. 3-71).

In disclosing the potential impacts of the proposed project and alternatives, consideration should be given to whether and to what extent the impacts, across all resources, may be exacerbated by expected climate change in the project area. In keeping with the draft guidance, we recommend that the USACE provide a more robust discussion of the anticipated effects of climate change on the overall project.

Recommendations:
Include, in the Final EIS, a summary discussion of climate change and ongoing and reasonably foreseeable climate change impacts relevant to the project, based on U.S. Global Change Research Program[2] assessments, to assist with identification of potential project impacts that may be exacerbated by climate change and to inform consideration of measures to adapt to climate change impacts.

Considering that the project is planned to be in operation for up to 30 years, provide a more robust discussion of the anticipated effects of climate change upon overall project goals and objectives. Compare the action alternatives with regard to their vulnerability to such effects and indicate what actions, if any, could be taken to minimize these effects where they are found to represent a risk to any goals or stipulations.

Consider, in the Final EIS, practicable changes to the proposal to make it more resilient to anticipated climate change, as appropriate.[3]

Consider committing in the Final EIS and ROD to include the following requirements in contract solicitations for project construction and operations:

a) The use of energy- and fuel-efficient fleets;
b) Assurance, to the extent possible, that construction activities will utilize grid-based electricity and/or onsite renewable electricity generation, rather than diesel and/or gasoline powered generators;
c) The use of zero emission or alternative fueled vehicles;
d) The use of lighting systems that are energy efficient, such as LED technology;
e) The use of the minimum amount of GHG-emitting construction materials that is feasible;
f) The use of cement blended with the maximum feasible amount of fly ash or other supplemental cementitious materials that reduce GHG emissions from cement production;
g) The use of light-colored pavement where feasible; and,
h) Recycling of construction debris to the maximum extent feasible.

Air Quality

The EPA is pleased to see the incorporation of applicant-proposed air quality measures and additional mitigation measures that would minimize impacts on air resources. We recommend that the best available emission control technologies be implemented for construction, ahead of the California Air Resources Board's in-use off-road diesel vehicle regulations, regardless of

[2] http://www.globalchange.gov/

[3] See footnotes 52 and 53 of the CEQ's December 2014 revised draft guidance for additional information and references on climate change adaptation and resiliency.

fleet size.[4] EPA began phasing-in Tier 4 standards for non-road engines in 2008;[5] however, the DEIS does not mention the availability of Tier 4 non-road engines. The use of such engines would result in an approximately 90% reduction in NO_x and PM emissions, compared to Tier 3.

Recommendations:
Ensure that the proposed mitigation measures in the DEIS are implemented on a schedule that would reduce construction emissions to the maximum extent feasible.

Discuss, and include emission tables for, various classifications of on-road and non-road engines, highlighting emission levels for PM_{10}, $PM_{2.5}$ and NO_x.

Disclose the expected availability of Tier 4 engines for the construction equipment. Commit to using non-road construction equipment that meets Tier 4 emission standards, when available, and best available emission control technology, for construction that occurs prior to Tier 4 standards availability.

Include in the Final EIS all applicable state and local requirements, and the additional and/or revised measures listed below. Include a commitment that the following measures will be incorporated into construction contracts:

Mobile Source Controls:
- Employ periodic, unscheduled inspections to limit unnecessary idling and to ensure that construction equipment is properly maintained, tuned, and modified consistent with established specifications.
- Prohibit any tampering with engines and require continuing adherence to manufacturer's recommendations.

Administrative controls:
- Identify where implementation of mitigation measures is rejected based on economic infeasibility.
- Prepare an inventory of all equipment prior to construction, and identify the suitability of add-on emission controls for each piece of equipment before groundbreaking.[6] Where appropriate, use alternative fuels.
- Develop a construction, traffic and parking management plan that minimizes traffic interference and maintains traffic flow.

---

[4] See CARB's Factsheet at: http://www.arb.ca.gov/msprog/ordiesel/faq/overview_fact_sheet_dec_2010-final.pdf
[5] See EPA website: http://www.epa.gov/nonroad-diesel/2004fr/420f04032.htm#standards
[6] Suitability of control devices is based on: whether there is reduced normal availability of the construction equipment due to increased downtime and/or power output, whether there may be significant damage caused to the construction equipment engine, or whether there may be a significant risk to nearby workers or the public.

Consultation with Tribal Governments

The USACE initiated government to government consultation with Native American tribes in August 2012 and again in November 2014. The Amah Mutsun Tribal Band submitted a scoping letter on September 6, 6 2012, noting its opposition to the proposed project and identifying its concerns. According to the DEIS, the USACE is continuing to work with the tribe and applicant to further evaluate the tribe's concerns (pg. 4 3-424).

Recommendations:
Describe, in the Final EIS, the process and outcome of government-to-government consultation between the USACE and the Amah Mutsun Tribal Band. Identify the issues that were raised, and explain how those issues were addressed and how impacts to tribal or cultural resources will be avoided or mitigated, consistent with Executive Order 13175, *Consultation and Coordination with Indian Tribal Governments*, Section 106 of the NHPA, and EO 13007, *Indian Sacred Sites*.